

## Review: Contemporary debates on tourism in the Antarctic

Few human activities in the Antarctic have been as consistently controversial as the question of tourism. Conservationists that see the increasing tourist numbers released each season by the International Association of Antarctic Tourist Operators (IAATO) become increasingly concerned about the impact of the industry on the Antarctic environment. Governments are concerned about the potential interference tourism could pose for their scientific programmes, or are eager to develop the economic benefits that tourism represents for their ports. Recent events have ensured that Antarctic tourism stays on the top of the agenda for the Antarctic community: the first voyage of the 4,160<sup>1</sup> capacity *MS Golden Princess* into Antarctic waters (Bertram, Gunn and Stonehouse, 2007), the largest tourist vessel to date, the sinking of the emblematic *M/V Explorer* in 2007 (Austen, 2007) and the grounding of the *M/V Ushuaia* in 2008 (Revkin and Robbins, 2008).

Previous reviews of the literature on Antarctic tourism have found that the majority of research falls into three broad themes: tourism patterns; tourism impacts; and tourism policy and management<sup>2</sup> (Stewart, Draper and Johnston 2005). Stewart, Draper and Johnston suggest two further research clusters which require development to further our understanding of Antarctic tourism: Tourist experience; and Global changes and Large-scale influences, with the former starting to receive attention (Powell, Kellert and Ham, 2008).

This review will not attempt to replicate the existing reviews of Antarctic tourism. Instead it will try and supplement existing reviews by looking at the most recent debates that have developed in the last few years. These debates include: ongoing discussion by the Antarctic Treaty Consultative Parties (ATCPs) at their annual Antarctic Treaty Consultative Meeting (ATCM), the latest being ATCM XXXI held in Kyiv, Ukraine, on ways to improve regulation of Antarctic tourism; debates around monitoring the impact of tourism, including the efficacy of the existing Environmental Impact Assessment (EIA) regime and inclusion of benefits, such as the 'ambassadorial' effect; and debates around new tourism activities, such as extreme adventure activities and new 'mega-yachts' acting outside the IAATO system. The review will survey these debates along the three themes outlined, with tourist patterns and tourism impacts examined in turn, with the responses of the ATCPs included throughout.

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<sup>1</sup> The *MS Golden Princess* is certified to carry 3,100 passengers and 1,060 staff. The first cruise carried slightly less than this maximum with 1,100 staff and 2,425 passengers (Bertram, Gunn and Stonehouse, 2007:177).

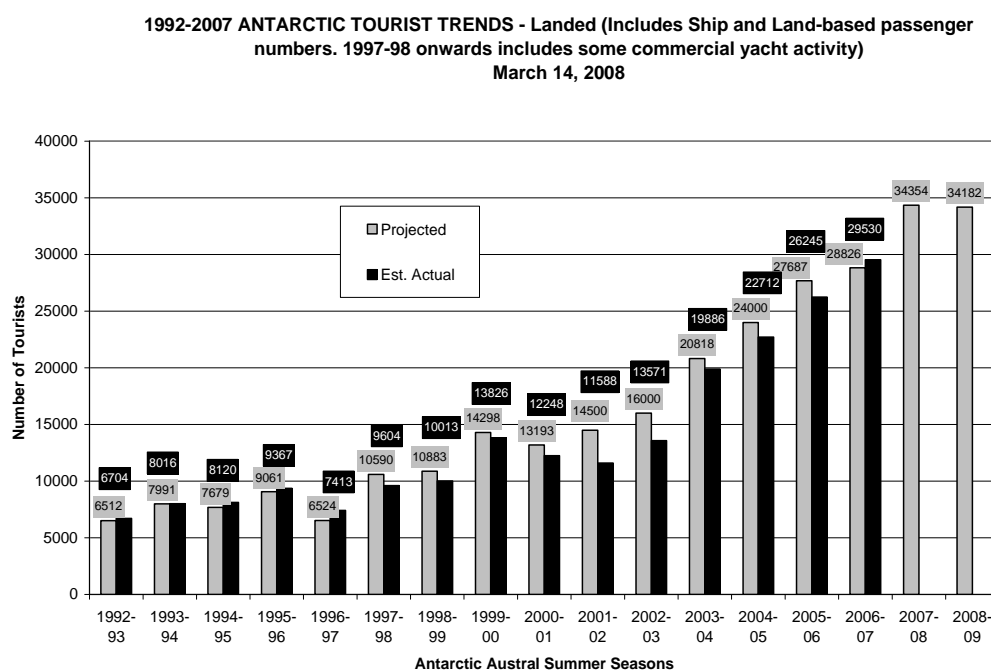
<sup>2</sup> A fourth research cluster, Tourism Development, is included in Stewart et al, but relates predominantly to Arctic research, so will not be included in the following discussion.

## Tourist Patterns

*"There's been kind of an explosion of tourism in Antarctica. Do we want this to become Disneyland or do we want some controls?"* Jim Barnes, executive director of ASOC (quoted in Austen, 2008)

Tourism patterns are one of the easiest to measure, and therefore most reported, elements of Antarctic tourism. IAATO submits an annual overview of the previous season and predictions for the coming season at each ATCM (see ATCM XXXI, 2008a for the latest report) and the figure of tourist trends (Figure 1 below) features in much of the literature on Antarctic tourism. Figure one shows the substantial growth in tourism in the Antarctic from a low base of 6,704 when collection commenced in 1992/3 to the last season total of around 32,000<sup>3</sup>.

*Figure One: Antarctic Tourist Trends 1992-2008: Landing vessels*



Source: ATCM XXXI, 2008a<sup>4</sup>

Figure one only shows landed passages, however, and therefore misses out on an important trend in Antarctic tourism during this time period: the increased number of cruise only passengers. Cruise-

<sup>3</sup> The report contains two inconsistent estimates of 32,637 (p.19) and 32,198 (p.6).

<sup>4</sup> Note: the revised figures submitted to the ATCM XXXI (dated May 20, 2008) include a 2007/08 estimated actual figure of 32,637 and lower estimated figure for 2008/09 of 30,148 (see IAATO, 2008:19).

only passengers have increased from essentially zero<sup>5</sup> prior to the 1999/2000 season, to a significant minority of passengers (13,015) in 2007-08 (ATCM XXXI, 2008c:6). This shift is expected to continue and increase in the next 10-15 years as smaller ships are phased out and replaced with larger ships (ATCM XXXI, 2008c:7).

The increase in large ships conducting Antarctic tourism operations could be expected to lead to a benefit in terms of the environmental impact per capita, as larger ships (>500) are not permitted to undertake landings under current ATS regulations, and tend to spend a shorter period of time in Antarctic waters (3-4 days according to ATCM XXXI, 2008c:6). However, there are also additional risks involved. Where the MV Explorer or MV Ushuaia could be assisted by one or two similarly sized vessels when they faced difficulties, the MS Golden Princess would require a substantial proportion of the existing Antarctic fleet to assist in evacuation or require assistance from the South American continent, which could take days. This search and rescue function has been discussed at the latest ATCM, led by the USA (ATCM XXXI, 2008b). As the burden for search and rescue operations tends to fall on the closest party to an event, the increase in tourism to Antarctica places significant risk on the national science programmes of ATCPs, who are likely to be incorporated into rescue efforts and have been in the cases of the MV Explorer and MV Ushuaia. This increased risk is a case of a negative externality

While cruise-based tourism is by far the largest sector of Antarctic tourism, small niche-tourism enterprises are starting to increase and raise concern (ATCM XXXI, 2008d; Murray and Jabour, 2004; Jabour, 2005). Extreme adventure activities have been established in Antarctica since Adventure Network International (ANI) started operations in 1985, with ANI now offering trips to Mt Vinson and skiing trips to the South Pole from their station in the Patriot hills (ANI, undated). Independent expeditions have increased in recent years and have frequently required the assistance of national program base when they have encountered difficulties (Murray and Jabour, 2004:313-314). This places strain on the resources of these national programmes and has the potential to disrupt science activities if significant resources need to be diverted to search and rescue efforts. IAATO is also concerned in the activities of “mega-yachts”, very high-end luxury yachts that are acting outside the IAATO and ATS systems (ATCM XXXI, 2008c:7-8). While to date there have been few incidents involving these vessels, as technology improves there is the potential for increased activity in this area. These emerging areas highlight the weakness of a self-regulating system when some groups choose not to participate in the system.

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<sup>5</sup> This refers to ongoing, scheduled cruises, and does not assert that the activity was unknown prior to the 1999/2000 season.

## **Tourism Impacts**

### *1. The Environmental Impact Assessment system*

The impact that tourism has on the 'fragile' Antarctic environment<sup>6</sup> is a central argument in calls to increase regulation of Antarctic tourism. The impacts of concern to critics are interference with the biological systems of the Antarctic through pollution, both marine and terrestrial, direct disruption, i.e. through increasing stress levels in wildlife populations at sites visited by large tourist numbers, and the introduction of alien species into the Antarctic biosphere.

Tourism impacts are regulated under the ATS system of Environmental Impact Assessment (EIA). All human activities in the Antarctic need to be assessed as to their expected environmental impact prior to taking place, with different levels of assessment depending on whether the activity is expected to have a 'less than minor and transitory', 'minor and transitory' or 'greater than minor and transitory' impact. To date all tourism activities have been assessed as having a minor and transitory impact or lower, i.e. no tourist activity has yet to complete a Comprehensive Environmental Evaluation (CEE), the highest level of EIA under the treaty system.

This system has a number of significant flaws when applied to tourism in the Antarctic. The first is in the vagueness of the notion of minor and transitory as evaluative criteria for measuring impact, a point raised by several ATCPs at the last ATCM (ATCM XXXI, 2008:44). The second is in the weakness of the system in addressing the cumulative impacts of ongoing activities such as tourism. The system developed to monitor the activities of state science programs, and is ill-equipped to deal with the impacts of tourism (Hemmings and Roura, 2003). Under the system tourist operators each submit their EIA to the respective ATCP that they operate under (assuming they operate under an ATCP, which is true of the vast majority of operators, exceptions to this have been discussed under tourism patterns above). As this information is rarely shared the cumulative impact of the industry cannot be gleaned from individual EIAs.

This is important as even if the terms minor and transitory were well defined, a single tourist cruise could easily fall well below the assimilative capacity of the environment (in terms of pollutants, broadly defined to include noise and the stress on wildlife caused by the proximity of tourists) and be adjudged 'minor and transitory', legitimately, under the EIA system. However, as the environment is being polluted by a series of these cruises, each below the crucial limits individually, the cumulative impacts of the pollutants may be greater than the assimilative capacity of the system.

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<sup>6</sup> See Jabour, 2005 and Mortimer, 2005 for an interesting, if brief, discussion of alternative attempts to characterise the Antarctic environment in terms of fragility or strength.

This issue was raised by France in a working paper (#34) submitted to the last ATCM titled *A Mechanism for Centralizing Tourism and Non-governmental Activity Declarations and Authorization Requests Suitable for Taking Cumulative Impacts into Account* (ATCM XXXI, 2008e). The paper outlines the issue discussed above and suggests a mechanism for sharing the information contained in the EIAs submitted individually by IAATO operators. The suggestion was discussed and received some support from other ATCPs, while other parties were more cautious (ATCM XXXI, 2008:47).

While this suggestion goes some way to addressing the issue of inadequate data for evaluating the overall environmental impact of the tourism industry as a whole, it would only be a partial solution if implemented, as the requirements and interpretation of impacts would vary greatly from jurisdiction to jurisdiction. There is also an issue with the EIAs being undertaken by the tourist operators themselves. To get a better picture of the impact of the tourism industry as a whole, a CEE conducted by an independent body that looked at the cumulative impacts of the industry across the season is required.

## *2. Monitoring and Compliance issues and distinguishing changes in environmental conditions due to tourism from general changes*

Monitoring the impacts of Antarctic tourism raises some difficult issues of measurement in addition to the limitations of the EIA system. As R.Tucker Scully points out in the *Chairman's Report from the Miami Meeting on Antarctic Tourism*<sup>7</sup>, "[m]onitoring the impacts of tourism in Antarctica poses particular challenges because they are likely to be sub-lethal, chronic and/or cumulative and they must be teased out against a background of extreme and growing variability in environmental conditions" (ATCM XXXI, 2008c:10). This raises three issues that hamper the monitoring of tourism impacts: the cumulative nature of impact, discussed above, the difficulty in monitoring small changes to variables in an environment that is poorly understood, and the difficulty in distinguishing impacts from tourism from broad environmental changes from climate change, other human activities, particularly fishing, and adjustment to previous activities, such as sealing and whaling.

These issues have been acknowledged by both the ATCPs, with the US proposing that the Committee for Environmental Protection (CEP) look into ways of improving the measurement of tourist impact (ATCM XXXI, 2008:47), and IAATO (ATCM XXXI, 2008c:10). Both groups have called for a 'strategic vision' to be developed that outlines the future regulatory regime for Antarctic tourism, with the United Kingdom putting forward a working paper to develop a vision for tourism out of session, with

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<sup>7</sup> The Miami Meeting was convened by IAATO, with the participation of a number of ATCP delegates as well as IAATO representatives, to discuss the future of Antarctic Tourism in March 2008. The Chairman's report from this meeting is IP19 from ATCM XXXI.

the aim of having this ready for ATCM XXXII in 2009 (ATCM XXXI, 2008f; ATCM XXXI, 2008c:10-11). However, the UK's proposal is not designed as a regulatory instrument, it is described as a non-mandatory and aspirational tool as a first step towards taking a more proactive approach to the management of Antarctic tourism (ATCM XXXI, 2008f).

The uncertainty inherent in the measuring and monitoring the impact of tourism in the Antarctic has led to some commentators calling for the application of the precautionary principle in the case of Antarctic tourism (Bastmeijer and Roura, 2004), or argue that there is a 'huge anomaly' between the treatment of mining and tourism under the ATS and that tourism should be regulated to the same degree (i.e. limited or banned) (Scott, 2001). Arguments that call for much tighter regulation of Antarctic tourism based on the precautionary principle have some resonance with ATCPs with 'many parties' agreeing that "a precautionary approach was necessary especially when information was limited" (ATCM XXXI, 2008: 44, point 183). However, the precautionary position has not advanced far beyond rhetoric because of the difficulty in tying specific effects to tourism, even conceptually. While there is broad agreement that there is the potential for cumulative impacts and adverse damage to the environment, there seems to be little in the way of theoretical models of damage that could be used to justify the implementation of the precautionary principle.

### 3. *Tourists as 'Ambassadors' for conservation*

*"I'm definitely a big believer that the polar regions are incredible platforms for education. It makes issues like climate change real and personal and these kids have come back and made a difference. But I also believe we have to do it in a way where we're obviously not having any impact on the places we're going. But there do need to be limits and more rules."* Geoff Green, founder of the program *Students on Ice*, which has taken more than 1,000 students from three dozen countries to the Arctic and Antarctic to promote environmental education in context. (quoted in Revkin, 2008)

One of the recent streams of thought in the literature on the impact of tourism in the Antarctic is the idea of 'ambassadorship'. The idea developed from Antarctic tour operators seeking to broaden the conceptualisation of impact against the focus on the potential negative impacts of tourism that were catalogued by the scientific and NGO groups. Broadly, the idea of an ambassador effect relates to changes in behaviour that arise as a consequence of experiencing the Antarctic (as a tourist) that are environmentally beneficial, for example advocacy, fundraising or donating to Antarctic charities (Maher, Steel and McIntosh, 2003). Maher et al (2003) suggested that ambassadorship could be thought of as a 'cycle', incorporating the tourist's anticipation of the event, their experience during the event and changes in behaviour as a result of the event.

A recent article by Powell, Kellert and Ham (2008) sought to test this theory of ambassadorship. 266 tourists from eight Antarctic trips completed both pre-visitation (on the first day of the trip) and post-visitation surveys (on the final day of the trip), with 125 of these participants also completing an additional survey three months after the trip concluded. The paper contains important information about the demographic characteristics of tourists, their motivations for participation and general knowledge of Antarctica.

The most interesting finding from the perspective of the 'ambassadorial' discourse was that "[e]nvironmental behavioural intentions increased significantly immediately after participation, however three months after participation, the results indicated that participants only incrementally changed their environmental behaviours" (Powell, Kellert and Ham, 2008:238). This suggests that the initial surge of environmentalism is quickly eroded once people return to their homes and lives and slip back into pre-existing habits. Further research is required to dismiss the idea of an ambassadorial effect, but this article has started to probe the issue deeper than had been the case.

### **Conclusions**

Tourism in Antarctica is a controversial subject, made more so by a recent series of headline making stories of cruise ships requiring rescuing. It seems likely that tourism will remain a controversial subject as long as information on the impacts of tourist activities remains poor. Attempts are being made to improve the monitoring of tourism activities, but the increasing numbers and diversity of tourist activities makes the task continually more complex for policy-makers.

This review surveyed some recent scholarship into Antarctic tourism and the material presented to the most recent ATCM relating to tourism and non-governmental activity. This material paints a picture of widespread agreement that something needs to be done to regulate the Antarctic tourism industry with little consensus on what form that regulation should take. Whether or not the ATCPs and IAATO operators can come to some agreement as to a 'vision' for the future and put into practice the 'proactive' approach that is sought is a question for the next ATCM in Baltimore.

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